

A NEW *PTILOTUS* (AMARANTHACEAE) FROM QUEENSLAND

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Summary

A new species of *Ptilotus*, *P. blakeanus* from Queensland, is described and figured, with some discussion on its affinity to *P. brachyanthus*.

By courtesy of Dr R. W. Johnson, I have been able to have on loan to Munich for closer examination some undetermined material from the Queensland Herbarium. Among these specimens there is a sheet bearing S. T. Blake's collection No. 11107 and a label in C. T. White's writing "A solitary sp. in Herb. Bri and labelled *T. aervoides* F. Muell. which it certainly is not, I think it a n.sp. aff. *T. brachyanthum* F. Muell. but wants careful checking." Closer examination brought to light some well pronounced differences showing that for all the resemblance to *P. brachyanthus* (F. Muell. ex Benth.) F. Muell. in floral details the new taxon is distinct enough to give it specific rank.

Ptilotus blakeanus Benl, sp. nov. affinis *P. brachyantho* (F. Muell. ex Benth.) F. Muell., a quo praecipue recedit sic: caulibus haud dense lanatis nec tomentosis, mox glabrescentibus, spicis cum apice conico inferne partim laxi- vel remotifloris.

Typus: Warrego District: Chesterton, 25° 21' S, 147° 20' E, alt. 540 m, 7 Apr 1936, S. T. Blake 11107 (BRI 230078), holotypus). (see Plate 3).

Herba perennis (annua?) caulibus compluribus basi lignosis, erectis vel arcuati-erectis, ad 28 cm longis, pauciramosis, juvenilibus puberulis, vetustioribus sparse indutis vel glabrescentibus, tandem pubescentia (pilis crispis indistincte et remote nodulosis) in partes superiores et in axillas restricta. Caules ramulique monostachyi, apicem versus pedunculum et rhachidem spicarum formantes, per totam longitudinem parce foliatis. Folia alterna, raro specie secunda, ad 3 cm et ultra distantia, basalia distincte petiolata laminis ad 4.5 × 1.1 cm, omnia in apice mucronata, primo modice puberula mox (sub)glabra, axillis lanatis. Spicae solitariae terminales primo ovoideae circa 1.2 cm diametro, demum conici-cylindraceae ad 4 cm longae (floribus inferioribus remotis omissis). Flores brevissime pedicellati ad circa 80 dense congesti, 1-8 inferiores (interdum binatim) 0.3-2 cm distantes. Bractea bracteolaeque scariosae nitentes concavae, integrae, apice acutiusculo, uninervae, extus (laxe) pilosiusculae, pilis indistincte articulatis basi et costae orientibus, apicem attingentibus vel paullulo excedentibus obsessae demum glabrae, superstites, subinaequales: Bractea (oblongi-)ovata 2.2-3 × (1.5-)1.8 mm, dilute succinea; bracteolae latiores cordatorbiculares 2.6-3.2 × 2.2(-2.7) mm, ventricosae, diaphanae. Perianthium pubescentia dorsali tepalorum absconditum. Tepala distincte trinervia, nervis lateralibus areolam viridem incrassatam includentibus, extus pilis copiosis imprimis basi orientibus obtecta; 2 exteriora circa 4.3 × 1.2 mm, superne late limbata, apice obtuso, intus glabra; 3 interiora circa 3.6 × 0.5 mm, vix limbata, apice acuto, inferne pilis crispis marginalibus saepe introflexis induta. Stamina 5 omnia fertilia, inferne in cupulam turbinatam glabram ad 0.8 mm altam, basi perianthii tantum insidentem connata, pseudostaminodiis nullis; filamenta circa 1 mm longa, antheris lati-ellipsoideis 0.35 mm longis. Ovarium demum deplanati-globosum circa 1.5 mm diametro, vix stipitatum, glabrum; stylo centrali brevi (0.8 mm).

Perennial or annual herb, moderately sized, laxly branching. Stems upright or slightly arcuate ascending with a woody base of ca 2 mm in diameter, 20 to 28 cm tall in present material; sparsely and irregularly branched, dividing near ground-level or towards the middle, the few slender main branches simple or with 1(-2) side branches of up to 15 cm long. Young parts evenly puberulous with curved and curly hairs somewhat intricate and



True:
A collection of the Hervey Bay
*to be labelled *Ptilotus blakeanus**
at 2. Benl. who?
collected 20. 3
Hervey Bay, 200 m. off
shore of the Hervey Bay
Hervey Bay, Queensland;

QUEENSLAND HERBARIUM: BRISBANE
 FLORA OF QUEENSLAND DISTRICT
 25 21' S 147 20' E 240 m. alt.
 coll. S.P. Blake 11107 07 Apr 1936

Ptilotus

Family	Habitat	Light	Soil	Altitude	Aspect

Chenopodiaceae
 In *Pycnanthus melanorrhizus*.
 Inflorescence white, perianth green inside.

Ptilotus blakeanus Benl
 Holotypus
 Det.—rev.—G. BENL. München 1979

QUEENSLAND
 HERBARIUM
 230078
 BRISBANE

Plate 3. Holotype of *Ptilotus blakeanus* Benl

slightly appressed, indistinctly and remotely nodose, up to ca 1.7 mm long, becoming sparse and evanescent; finally the pubescence almost completely limited to young shoots and leaf axils, these developing dense tufts of \pm straight or wavy hairs (up to 3 mm long) when a new shoot or leaf is sprouting forth. The vestiture at first obscuring longitudinal ribs and stripes, in lower portion sometimes with fine tubercles between them. Stems, branches and branchlets often strongly extenuating towards apex, forming peduncles with a single spike each. Leaves erect-spreading, entire, subcoriaceous, initially somewhat pubescent with hairs as for shoots, then glabrous except axils. Basal ones few arising near stem base, spatulate-oblong, up to 5.5 cm long by 1.1 cm wide, long-petioled (to ca 1 cm). Stem leaves 0.5 to 3.5(5) cm apart, obovate-oblong to almost linear-lanceolate, up to 3.7×0.7 cm but usually smaller, lower ones \pm petiolate, upper ones (sub)sessile; all with a short rigid point of ca 0.5 mm. "Inflorescence white" (S. T. Blake on label), becoming pale brownish-white in dried state, upright, pedunculate, solitary, terminal only, compact part up to 4 cm long and 1.2 cm across, at first ovate in outline (ca 2 cm long) then elongate cylindrical, always with a conical top; more or less interrupted in lower portion which may reach the same length. Rachis ca 0.5 mm in diameter near the middle, densely villous with hairs as for young shoots but less crisp and to 3 mm long. Up to about 80 pedicels close-set in compact upper portion, each ca 0.3 mm long, jointed above the bracteoles. The lower solitary flowers (up to 8 and not rarely in pairs) not yet to be seen in young (to 2 cm long) spikes, finally inserted to 2 cm apart at base. Bract and bracteoles very inconspicuous, membranaceous, entire, appressed to perianth, midribbed, cuspidate tapering to a minute \pm curved point; weakly pilose especially towards the base, the dorsal hairlets substraight, often twisted, up to 2.5 mm long; at length glabrous or almost so, rather persistent, unequal; bract (oblong-)ovate to 3×1.8 mm with a keel-like lower midvein; bracteoles broader and more obtuse, cordate-orbicular up to 3.2×2.7 mm, less hairy, transparently shining. Perianth scarcely attaining 4.5 cm long when full grown, enveloped by a copious dorsal indument consisting of homogeneous remotely septate often twisted hairs forming dense masses of broad waves in lower half, later on straightening, markedly overtopping the glabrous ends of tepals and entirely obscuring the whole perianth. Tepals free almost from their disc-like indurated base concave beneath (the pedicel attachment sunken), inner view showing three bold ribs in lower two-thirds, the outer ones bordering a greenish coriaceous areole limbated by scarious entire margins except for the lower (lowest) portion; dorsal hairs whitish to creamy originating from the opaque centre but especially from (near) the basal disc, waved in first stages, stretching up to 5.5 mm and longer surpassing the glabrous tepal ends for about 1.5 mm. Outer tepals linear-obovate 4-4.3(-4.5) mm long, broadest (1-1.2 mm) in upper half, the translucent margins obviously widening above the middle; apices (sub)obtuse with glabrous tips of ca 1.2 mm long; glabrous inside, but often with some marginal crisp hairs towards the base. Inner tepals smaller, acute, less limbated, sublinear to narrow-lanceolate 3.4-3.6(-3.9) mm long by 0.5 mm broad, outside with glabrous tips ca 0.5 mm long, in lower half regularly with finer crisped \pm intricate hairs to about 2.5 mm long, rising especially from the edges and often turned in against inner surface. Androecium dainty. Five stamens found consistently fertile; subequal filaments capillary to flattened 0.8-1(-1.2) mm long, ca 0.5 mm wide in the middle, subulate at top, gradually dilated to 0.15 mm at base, connate below with 0.4-0.7 mm broad sinuses into an almost free turbinate membranous cup 0.5-0.8 mm high, entire, glabrous, basally attached to the perianth disc. Anthers pale broad-ellipsoid, ca 0.35×0.25 mm. Pistil entirely glabrous. Ovary broadly turbinate, short-stipitate and ca 1 mm long when young, at

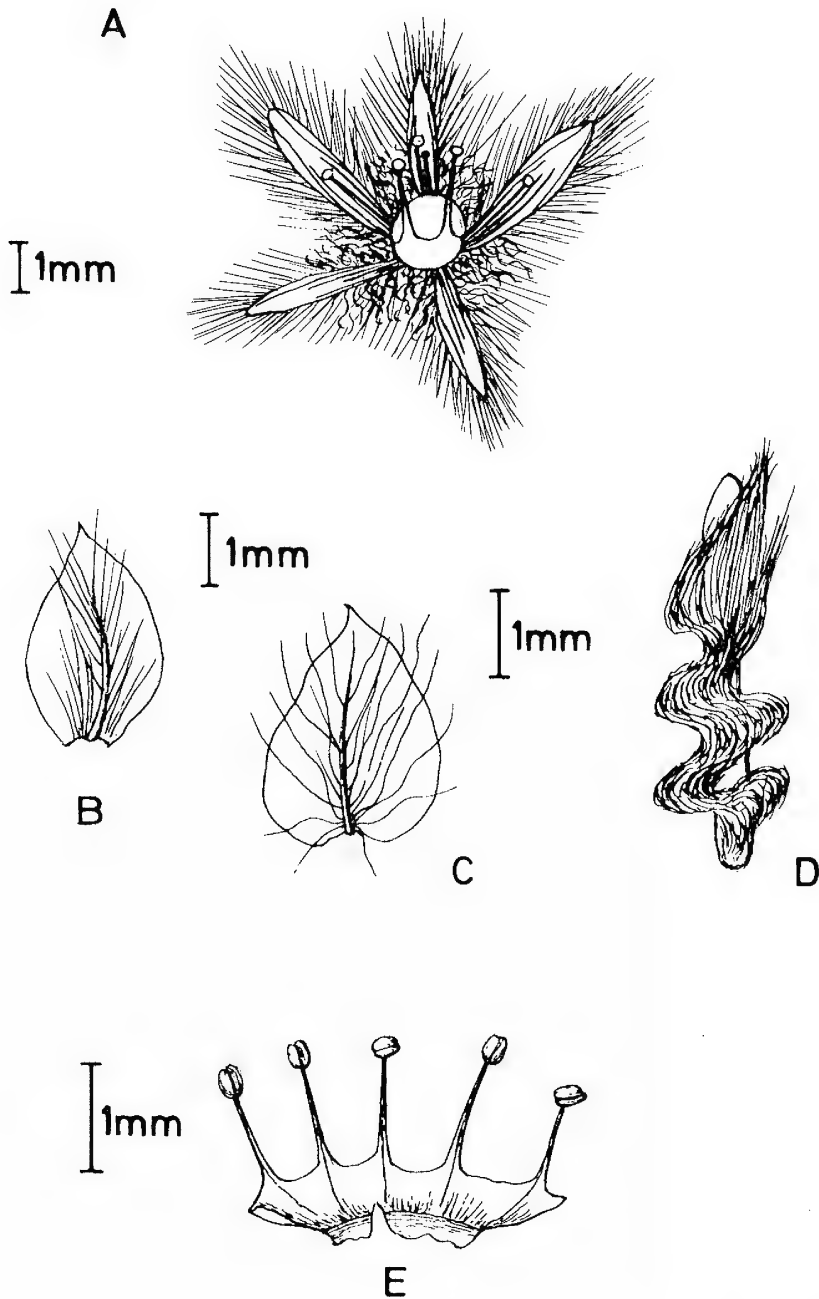


Figure 30. *Pilotus blakeanus* Benl, sp. nov. A. Flower from above. B. Bract, outer face. C. Bracteole, outer face. D. Outer tepal, outer view. E. Androecium.

length lens-like (with a narrow edge) to subglobose, up to 1.5 mm in diameter, (sub)sessile; style central straight, terete, comparatively short, somewhat thickened downwards, *ca* 0.8 mm long and 0.06–0.1 mm in diameter; stigma becoming reddish, level with the anthers (Plate 3, Fig. 30).

Whilst *P. brachyanthus* is recorded from 'low sandy ridge sparsely timbered' (Blake 11647) and collected in flower from June to November, *P. blakeanus* was found flowering 'in *Eucalyptus melanophloia*' in April.

The above description is based on the holotype, the only specimen of the new plant hitherto known. Primarily it is characterised by the arrangement and the shape of its inflorescences: In *P. brachyanthus* the spikes are always compact for the whole length, terminal (solitary or 2–5 congested) or lateral (subsessile or shortly peduncled) on stems and branches, thus rendering it distinctive from *P. blakeanus* where the spikes seem to be exclusively terminal and solitary; longer spikes are interrupted below. Their apex is here constantly cone-shaped, not rounded as in *P. brachyanthus*. The latter species has yellowish to 'pale brownish white flowers' at the beginning (see *S. T. Blake* 11647 from Mitchell District, 2 June 1936, BRI 230390), whereas the spikes of *P. blakeanus* are white initially becoming pale brownish. Today the spikes of both Blake's specimens collected in the same year are of pale brownish colour, in *P. blakeanus* even darker in part than in *P. brachyanthus*. The habit of this taxon is characterised by a tufty growth of the stems closer branched moreover and softly woolly to tomentose, becoming glabrous only toward stem base, which is not true for *P. blakeanus* as shown above; hence sterile specimens can be distinguished with certainty, too. But there is a number of additional differences between the two plants, e.g. in *P. brachyanthus* the foliage is denser, the uppermost leaves enveloping the young inflorescences; the spikes are somewhat wider and more fluffy.

By no means are the two taxa conspecific but separable from each other at the species level. (See Figure 30).